



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

|                 |             |                      |                     |
|-----------------|-------------|----------------------|---------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|

09/147,036 12/15/98 MAURER

HM22/0320  
NIKAIDO MARMELESTEIN MURRAY AND ORAM  
METROPOLITAN SQUARE  
655 FIFTEENTH STREET N W  
SUITE 330 G STREET LOBBY  
WASHINGTON DC 20005-5701

|          |
|----------|
| EXAMINER |
|----------|

|             |              |
|-------------|--------------|
| ART UNIT, V | PAPER NUMBER |
|-------------|--------------|

DATE MAILED:

03/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

# Office Action Summary

Application No.

09/147036

Applicant(s)

MAURER et al

Examiner

V. RYAN

Group Art Unit

1641

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 1 (one) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-40 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☒ Claim(s) 1-40 are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_.

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 1641

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-19, 25 and 36-40, drawn to a method of presenting polypeptides on the surface of a gram-negative bacteria.

Group II, claim(s) 20-24 and 26-35, drawn to a method of preparation of surface-exposed polypeptides.

The inventions and species listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: In order for unity of invention to be present, the claims must be linked by the same special technical feature. A special technical feature is defined by PCT Rule 13.2 as a contribution over the prior art. The shared inventive concept of Group I is taught by

Art Unit: 1641

Francisco et al et al (WO 93/10214) and therefore unity of invention does not exist.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Species A: Transporter domain of Aida protein from *E. coli*. (Claims 3, 23 and 40)

Species B: Transporter domain of the SepA protein from *Shigella flexneri*. (Claim 4)

Species C: Transporter domain of the IcsA protein from *Shigella flexneri*. (Claim 5)

Species D: Transporter domain of the Tsh protein from *E. coli*. (Claim 6)

Species E: Transporter domain of the Ssp protein from *Serratia marcescens*. (Claim 7)

Species F: Transporter domain of the Hsr protein from *Helicobacter mustelae*. (Claim 8)

Species G: Transporter domain of the Prn protein from *Bordetella* ssp. (Claim 8)

Species H: Transporter domain of the Hap protein from *Haemophilus influenzae*. (Claim 8)

Species I: Transporter domain of the BrkA protein from *Bordetella pertussis*. (Claim 8)

Species J: Transporter domain of the VacA protein from *Helicobacter pylori*. (Claim 8)

Species K: Transporter domain of the 190 kDa rickettsial cell surface protein. (Claim 8)

Species L: Transporter domain of the spaP. (Claim 8)

Species M: Transporter domain of the rOmpB. (Claim 8)

Species N: Transporter domain of the SlpT. (Claim 8)

Art Unit: 1641

In addition, one of the following passenger proteins must also be elected:

Claim 24: polypeptides, antibody, ligands, receptors, antigens, toxin-binding protein, protein with enzymatic activity, and inhibitor, antigen-binding domain of an antibody,

Claim 12:  $\alpha$  chain of MHC.

Claims 13 and 14:  $\beta$  chain of MHC.

Claims 27-35: passenger protein with non-covalent modification, passenger protein with covalent modification, passenger protein modified by glycosylation, passenger protein modified by phosphorylation, passenger protein modified by intrinsic protease, passenger protein modified by external protease.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a

Art Unit: 1641

claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The following claim(s) are generic: 1, 2, 9-11, 15-22, 25-27 and 36-39.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must

Art Unit: 1641

be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The Group and/or Art Unit location of your application in the Patent and Trademark Office may have changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1641.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Ryan whose telephone number is (703)305-6558.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-0196.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel, can be reached on (703) 308-4027.

Papers related to this application may be submitted to the Group 1600 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The fax number for Art Unit 1641 is (703)308-4242.

Application/Control Number: 09/147,036

Page 7

Art Unit: 1641

V. Ryan  
Patent Examiner/Art Unit 1641  
March 2000  
Ryan/vr



CHRISTOPHER L. CHIN  
PRIMARY EXAMINER  
GROUP ~~1800~~ 1641